NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

WETLAND CREATION

(ac.)

CODE 658

DEFINITION

A wetland that has been created on a site location which historically was not a wetland or is a wetland but the site will be converted to a wetland with a different hydrology, vegetation type, or function than naturally occurred on the site.

PURPOSE

To create wetlands that provide quality wetland functions.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to sites where no natural wetland occurred, or where a wetland exists or existed but the wetland class and function will be different from what historically occurred.

This practice is applicable only if the duration and frequency of hydrologic conditions can be established and maintained with average annual precipitation.

Created wetlands will not be constructed on sites containing hazardous waste under this standard. If the presence of hazardous waste materials in the sediment or fill is suspected, soil samples will be collected and analyzed for the presence of hazardous waste as defined by local, state, or federal authorities.

This practice does not apply to: a Constructed Wetland (656) intended to treat point and/or non-point sources of water pollution; Wetland Enhancement (659) intended to rehabilitate a degraded wetland where specific functions and/or values are enhanced beyond original conditions; or Wetland Restoration (657) intended to rehabilitate a degraded wetland where the soils, hydrology, vegetative community, and biological habitat are returned to original or near original conditions.

CRITERIA

General Criteria

Created wetland goals and objectives will consider and include, as appropriate, functions provided by natural wetlands of similar type and location.

The landowner shall obtain necessary local, state, and federal permits that apply before the practice is applied.

Adequate water rights and water availability will be assured prior to creation, if required.

The effect of any modification to the existing surface and /or subsurface drainage system on upstream and downstream landowners shall be evaluated. Upstream drainage shall not be impacted unless appropriate permissions are obtained or mitigation measures are implemented.

Created wetlands will only be located where the soils, hydrology and vegetation can be modified to meet the current NRCS criteria for wetland.

Establish vegetative buffers on surrounding uplands according to Filter Strip (393), Riparian Forest Buffer (391), and/or Riparian Herbaceous Cover (390) as appropriate. When technically feasible, minimum buffer width around created wetlands will be 100 feet.

Criteria for Hydric Soil Conditions

Establish an approximation of the soil topography typical for the wetland type(s) being established.

Criteria for Wetland Hydrology

Hydrology (rate and timing of inflow and outflow, source, duration, frequency, and depth of flooding, ponding or saturation) will be designed for the wetland type being established.

The standards and specifications for Dike (356**)**, Ponds (378*)*, Grade Stabilization Structure (410), Diversion (362*)*, Structure for Water Control (587), etc. will be used as appropriate. Refer to the Engineering Field Handbook, Chapters 13, "Wetland Restoration, Enhancement, and Creation," and 6, "Structures," for additional design information.

Existing drainage systems will be utilized, removed, or modified as needed to achieve the intended purpose.

Criteria for Hydrophytic Vegetation

Preference shall be given to native wetland plants. Species regarded as invasive will not be used.

Where natural colonization of selected species will realistically dominate within 5 years, natural regeneration can be utilized.

Adequate substrate material and site preparation necessary for proper establishment of the selected plant species shall be included in the design.

On sites where predominantly herbaceous vegetation planting and/or seeding is necessary, the minimum number of native species to be established shall be based upon the number of habitat types/ecological sites present. Sites created with only one habitat type/ecological site shall be established with at least two species adapted to the site. Sites with two or more habitat types/ecological sites (i.e., wet meadow, shallow marsh**,** deep marsh**,** etc.) shall be established with at least one native species on each habitat types/ecological site.

Herbaceous vegetation may be established by a variety of methods including: mechanical or aerial seeding, topsoiling, organic mats, etc., over the entire site, or a portion of the site and at densities and depths appropriate.

Vegetation establishment on forested wetlands will include a minimum of two adapted woody species (FOTG section II - Windbreak Interpretations). Seedling preparation and planting will follow Tree Planting (612). Seed planting rates and site preparation will follow Woodland Direct Seeding (652). Seed viability will be checked immediately prior to planting.

CONSIDERATIONS

Consider effect of volumes and rates of runoff, infiltration, evaporation, and transpiration on the water budget.

Consider the potential for a change in rates of plant growth and transpiration because of changes in the volume of available soil water.

Consider effects on downstream flows or aquifers that would affect other water uses or users.

Consider effects on wetlands or water-related resources and wildlife habitats that would be associated with the practice.

Consider locating site(s) adjacent to existing wetlands to increase wetland system complexity and diversity, decrease habitat fragmentation, and ensure colonization of the site by wetland flora and fauna.

Consider linking wetlands by corridors wherever appropriate to enhance the wetland's use and colonization by the flora and fauna.

The nutrient and pesticide tolerance of the species planned should be considered where known nutrient and pesticide contamination exists.

Consider effects on temperature of water resources to prevent undesired effects on aquatic and wildlife communities.

Consider the operation of water control structures to alter the hydrologic conditions necessary for the establishment of desired vegetation or control of undesirable vegetation.

Embankments and excavated slopes should be located and shaped in a manner that is compatible with the existing landscape.

Consider utilization of Restoration and Management of Declining Habitats (643) to select and establish desired cover on the wetland or buffer areas.

Consider utilization of native plant materials collected within 50 miles of the site.

Consider impacts to existing natural plant communities.

PLANS AND SPECIFICATIONS

Specifications for this practice shall be prepared for each site. Specifications shall be recorded using approved specifications sheets, job sheets, narrative statements in the conservation plan, or other documentation. Requirements for the operation and maintenance of the practice shall be incorporated into site specifications.

OPERATION AND MAINTENANCE

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance):

Timing and level setting of water control structures for the establishment of desired hydrologic conditions or for management of vegetation;

Inspection schedule for embankments and structures for damage assessment;

Depth of sediment accumulation to be allowed before removal is required;

Management needed to maintain vegetation, including control of unwanted vegetation;

If haying or grazing will be conductedhaying and livestock grazing plans will be developed to facilitate the establishment, development, and management of wetland and associated upland vegetation.

Any use of fertilizers, mechanical treatments, prescribed burning, pesticides and other chemicals to assure the wetland restoration function shall not compromise the intended purpose;

Biological control of undesirable plant species and pests (e.g., using predator or parasitic species) should be implemented where available and feasible;

A functional assessment (Hydrogeomorphic approach or similar method) may be used before and after creation to monitor progress at achieving goals.